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ABSTRACT

A study was conducted to improve understanding of higher education's impact on the growth, sustenance, and improvement of vocational education programs in higher and secondary education. The research focused on how higher education can improve higher and secondary vocational education during the next 10 years. Research was conducted using the Delphi technique (a series of sequential questionnaires) to gather expert opinion. The sample consisted of 30 leading higher vocational educators and 30 leading secondary vocational educators selected by nomination by the current president and 5 former presidents of the American Vocational Association. The study respondents (75 percent of the sample) identified four techniques as the most useful for improving vocational education programs: (1) improve the image of vocational education to all publics; (2) provide more opportunities for upgrading faculty and staff skills; (3) collaborate more with secondary program leaders; and (4) implement research that documents examples from work settings that illustrate the needs of literacy skills, teamwork, negotiation, problem solving, and critical thinking. The study concluded that higher education must be responsible for taking the initiative to improve vocational education programs. (KC)

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An Educological Perspective on Higher Education's Responsibility to Vocational Education

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Abstract

Vocational education has long played a role int he development and growth of formal education. As the delivery of educational services by academic institutions expands and continues to evolve, the role of vocational education must be addressed. In many settings, however, the institutions providing delivery must examine their own roles and responsibilities to various disciplines, such as vocational education.

The study of education and educational institutions has often taken on abstract, theoretically based structure rendering it of little use to practitioners and scholars attempting to further the process of education. Within the study of education, it has grown increasingly imperative to address the integration of educational delivery agencies within and across disciplinary boundaries. Perhaps the clearest example of the ability of agency integration and cooperation lies in the study of vocational education, particularly in the United States where federal mandates have attempted to force the segregation of vocational and technical education program offerings.

Conceptual Framework

This study has been designed to better understand higher education's impact on the growth, sustenance, and improvement of vocational education programs in higher and secondary education. With such a broad scope, it was necessary to define higher education as an institution rather than an inter-related series of independent activities or departments. Instead, higher education was defined to encompass the entire university community, often seen as the leader in lobbying, finance, research, teaching, and organizational administration.

Two research questions formed the foundation of this study: (1) How can higher education improve higher vocational education during the next ten years? and (2) How can higher education improve secondary vocational education during the next

ten years? Both questions were based on the assumption that higher education is a dynamic organization made up of individuals with the capability and capacity to respond to societal demands (Birnbaum, 1988). Societal demands need not be limited to the current demands of business and industry, but must include other education communities, such as high schools, colleges and universities.

While some may argue that responding to labor and curricular needs somehow diminishes the value of higher education (often referred to as being 'market driven'), the purpose of higher education has clearly been articulated as at least two-fold: to prepare individuals for a productive work force (Levine & Boyer, 1985), and to prepare individuals in critical analysis and appreciation (Rosovsky, 1990).

Higher education places a very real goal on being practical in all institutional efforts, from continuing education programs to curricular decisions, hence better facilitating the administrative and structural foundation which can allow for taking efforts to improve vocational education.

The challenge to vocational educators during the next decade will not be one of deciding what to do, but rather, obtaining the institutional resources and morale to accomplish these tasks. The compilation of techniques in which higher education can improve vocational education presented here represent the primary steps toward taking action on the part of educators and administrators in higher education.

Many of the techniques identified can be accomplished with little effort, as the real challenge to the future of vocational education lies in the implementation, on the part of those in higher education, of techniques to improve vocational education programs.

Procedures

The purpose for conducting this study was to establish a priority listing of techniques that higher education could employ to improve vocational education in both secondary and higher education. To date, no comprehensive listing of strategies exists, indicating that research methodologies employed should reflect the lack of quantitative analysis so common in other areas of education. The Delphi technique, considered a quasi-qualitative research method (Rojewski, 1990), was employed to gather expert opinion and thought on how higher education can best improve vocational education programs.

With the Delphi technique, utilizing a series of sequential questionnaires, a variety of data can be collected, including judgements, opinions, and attitudes on a particular topic (Van de Ven & Delbecq, 1974). Specific advantages of this technique have traditionally included: allowing for expert opinion without physically bringing the group together; equal access to input; no single domineering participant; assured anonymity; and time for reflective observation and analysis of responses (Sackman, 1975). The technique has also proven to be effective in identifying key

professional characteristics (Miller & Seagren, 1991) and in developing a portrait or profile of particular needs or desires (Miller, Spurgin, & Holder, 1991).

The sample for the study consisted of 30 leading higher vocational educators and 30 leading secondary vocational educators. The sample was determined by soliciting names of leading vocational educators from United States leaders in vocational education, that is, the current and five former presidents of the American Vocational Association. The selection of the sample in this manner was reflective of the 'snowballing' technique in which an individual with a certain characteristic can best identify others with similar qualities (Bogban & Biklen, 1982).

Results

The respondents completing all three rounds of the survey included 22 secondary vocational education leaders and 23 higher vocational education leaders, for a total response rate of 75% (n=45). Respondents developed a listing of 133 statements, yet after checking for duplication and editorial review, 83 statements remained to be rated.

For the second round of the Delphi, 36 statements developed by higher vocational education leaders achieved a mean group rating of grater than 3.5, and 31 statements achieved similar ratings of greater than 3.5 developed by secondary vocational education leaders. On these 67 statements, participants recorded

a total of 394 rating changes based on the feedback provided of group ratings of each statement. Only one statement achieved a combined group rating of greater than 4.5, while the majority of statements earned a combined group mean between 4.0 and 4.49 (see Table 1).

As the intention of the study was to develop a listing of possible techniques which higher education could implement to improve vocational education, the individual responses were collapsed and analyzed as group mean ratings. This allowed for the creation of a roster of strategies which held consensus between educational leaders at both levels of education. Respectively, 38 statements were considered to hold consensus, that is, a combined group rating of 4.0 or greater. These 38 statements either made reference to or contained actual content indicative of four broad categories in which higher education can improve vocational education, including instruction, policy issues, structural components, and organization or administration.

Instruction: Of the 38 statements achieving a group mean rating of 4.0 or higher, 45% were classified as germane to instruction. The statements varied from a high of 4.43 to a low of 4, with an average rating of 4.21.

The content of the statements being rated varied as much as the mean averages. For example, several statements, such as "be willing to teach basic skills in vocational education courses" and "be more willing to work with at-risk students in vocational

education programs" were indicative of vocational education's potential in dealing with special needs populations. Other statements encouraged higher education to "provide the leadership to make changes in the curriculum," "place thinking curriculum into higher education vocational course work," "assist in emphasizing behavior management and demonstrate techniques that can be used by teachers," "teach how to be effective advisors for vocational youth organizations," "emphasize to undergraduate teachers-to-be the changing nature of vocational education," "better emphasize to undergraduate teachers-to-be the importance of teaching," and "identify potential leaders in vocational education and give (them) additional training."

Instructional changes were also identified in updating vocational education programs, as reflected in statements such as "incorporate new instructional technology into vocational coursework," "implement research that documents examples from work settings which illustrate the needs of literacy skills, teamwork, negotiation, problem solving, and critical thinking," and "develop opportunities for industry to be an 'extension lab.'" Technology, while previously alluded to in two statements, was directly addressed in several statements: "develop teaching methodology which better addresses technology," and "help integrate changing technology into the secondary classroom."

Other areas identified by the respondents included integrated academics ("illustrate the integration of vocational

and academic education in coursework"), teacher training ("provide better supervision of first year vocational teachers"), and counselor training ("better train counselors for career guidance in a rapidly changing workplace with demand for highly skilled labor").

Organization and administration: The statements which comprise the category of organization and administration were, in general, particular activities which higher education could implement, organize, or administer. There were a total of 15 statements which fell under this category, achieving a mean score of 4.23.

A number of these statements encouraged increased cooperation and communication with the private sector: "promote working partnerships with the private sector," "provide leadership in working with business and industry," "develop opportunities for secondary and higher education leaders to work jointly with business and industry," and "provide better direction and research in assessing industry needs."

Higher education was also defined as having a role in faculty and staff continuing education programs. Respondents provided some interpretation for this role with the statements "provide more opportunities for upgrading faculty and staff skills," "provide additional in-service opportunities for teachers, counselors, and administrators," "provide direction in implementing applied academics," "provide more in-service sessions reviewing new teaching techniques," and "synthesize and

distribute current and changing research to secondary vocational teachers."

Several statements were also identified which dealt with perceptions toward vocational education. Respondents indicated that higher education must recognize "the unique problems to be studied in vocational education," and need to "work to improve the image of vocational education to all publics." The image issue was also reflected in "work within higher education to improve the image of vocational education students and faculty," and "encourage outstanding students in technical programs to consider education fields."

Other statements within this category included: "develop a better, flexible attitude toward change," "promote, complete, and publish research which discusses future curriculum needs," and "continue to support college methods courses in vocational education."

Policy: The previous two sections were designed to allow for organizational changes in the relationship between and within higher and secondary education. Five statements, however, pertained to possible procedural alterations in formal and informal policy guidelines and behaviors. The statements which held implications for more than organizational considerations and have direct bearing on curricular decisions achieved the highest group mean rating with 4.28.

Only one of the statements within this category dealt with the research function of higher education, "increase applied

research which integrates other academic areas and vocational education," while the remaining statements focused on institutional culture. One statement provided, with revealing description, what could be a common attitude toward the higher-secondary education relationship, "create a stronger and healthier working relationship with secondary schools to provide support and guidance." Against this backdrop, statements developed by respondents aligned themselves: "collaborate more with secondary program leaders," "increase and continue continuing education programs to meet the needs of practitioners," and "provide professional growth activities for area vocational teachers."

The issue of whether these are legitimate policy questions or administrative decisions may be based largely upon the scope and mission of the higher education institution. Most vocational education programs that offer some form of teacher training have a significant responsibility to traditional institutional functions including, teaching, research, and service. The issue of the legitimacy of these statements being policy contentions has the potential to be based in the defined function of the institution. For virtually all vocational education programs, however, the additional cultural-attitude, collaboration service activities advocated by study participants is, and in a financially cautious environment will continue to be, a question of policy.

Conclusions

Vocational educators at both the secondary and higher education level have identified numerous techniques and strategies for the institution and resources of higher education to aide in the improvement of vocational education. Every indication was present to indicate that vocational education leaders desire higher education's involvement in improving vocational education programs. In a variety of venues, higher education can assist vocational education programs by taking a leadership role in instructional design and delivery, making policy amendments which will improve the climate of relations between higher and secondary vocational education, and through adjusting organizational and administrative barriers which may currently impede cooperation, continue a quest for excellence in vocational and career education.

The four techniques garnering the most support and consensus among study participants included:

*Improve the image of vocational education to all publics;

*Provide more opportunities for upgrading faculty and staff skills;

*Collaborate more with secondary program leaders;

*Implement research that documents examples from work settings which illustrate the needs of literacy skills, teamwork, negotiation, problem solving, and critical thinking.

Due to the syntax of the research question, techniques identified solicited higher education's compromising, rather than

the negotiation and partial adjustments necessary to meet halfway with secondary education. Consequently, higher education, consisting of the professionals leading their respective institutions, must be responsible for taking the initiative to improve vocational education programs. The initiative must be addressed with conviction, and due to the financial undertones present in many of the techniques identified, higher education leaders must be willing to make financial commitments and reallocations to pay for excellence.

In very board terms, higher education must become more responsive to individual programmatic needs to improve vocational education. The types of responses developed were indicative of institutional self-focus, and a realignment with contemporary demands for a more practical education. Indeed, higher education has been called upon throughout the study to adjust and help others adjust to societal changes and the resulting new demands on curriculum. Only through a stronger partnership, as the data suggested, can vocational education move through current hardships and lay claim to the future.

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Table 1

Final Mean Ratings

Mean	# of Secondary	#of Hi Ed	#of Combined
4.5 to 5.0	8	3	1
4.0 to 4.49	34	33	37
3.5 to 3.99	14	23	25
3.0 to 3.49	11	8	4